

# Scientist Says Fuel Station Can Boost Payloads in Space

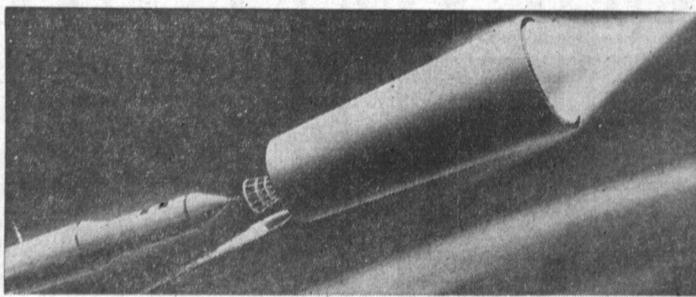
A fueling station for space vehicles 60 to 70 miles from earth could increase the range or payload of space missions by as much as 10 times, a research scientist of Northrop Corporation's Norair Division said in Philadelphia recently.

The fueling station, called PROFAC (propulsive fluid accumulator), would be a manned, air-gulping powered satellite. The scientist, Dr. Sterge T. Demetriades, described the PROFAC concept at the Symposium on Engineering Aspects of Magnetohydrodynamics at the University of Pennsylvania.

PROFAC, he said, could increase the capability of boosters such as the planned 1,500,000-pound-thrust Saturn rocket to include round-trip multi-manned missions to the moon and planets.

The PROFAC powered satellite would orbit in a region of extremely thin air, he said. It would accumulate air, liquefy and store it. Part of this air would be used to power the satellite and part would be taken on by outbound space vehicles.

Aboard these outbound vehicles, the air would be used for propulsion—by heating or ionizing it and accelerating it with nuclear energy or using it as an oxidizer for chemical rocket fuel. This would eliminate up to 90% of the load a booster rocket would have to lift from earth. Smaller boosters could be used,



FUELING STATION — Air-collecting PROFAC in foreground is ready to transfer liquid air to space vehicle in rendezvous at 60 to 70 miles. Payload increases 10 times.

or the increased efficiency could be used to extend range or payloads, Dr. Demetriades said.

However, he pointed out, to remain in orbit at altitudes of 60 to 70 miles the PROFAC satellite must be powered to overcome a small amount of aerodynamic drag and the greater drag caused by ram-air collection.

The satellite power would be provided by a ramjet using the principle of magnetogas dynamics. A small percentage of the collected air would be used to form a jet or highly accelerated ions. Electric and magnetic fields would then accelerate the ions to still higher velocities. These

ions would be mixed with a stream of air molecules.

Colliding with these air molecules, the ions would force them out the ramjet's exhaust nozzle at 50,000 feet per second or higher to produce thrust.

This process would use only part of the collected air. The remainder would be available for fueling of outbound space vehicles.

At present, the Norair scientist said, we need 300 pounds of booster rocket weight for each pound of payload to be landed on the moon. Use of the PROFAC technique, he said, could cut this ratio to 30 pounds of

booster per pound of payload.

The technical knowledge and hardware for liquefying the collected air is already available, he said. The principal problem remaining is the magnetogasdynamic or electrical acceleration of the air for propulsion. This problem, he said, should be solved by the time boosters large enough to put the PROFAC vehicle into orbit are available. The 6,000,000-pound thrust Nova rocket, due in the 1965-67 period, may be required.

Already, Dr. Demetriades pointed out, streams of air have been accelerated to 20,000 feet per second for periods of three to five minutes.

# Youth Band Slates Outdoor Concert

A concert will be given by the Torrance Area Youth Band at 7 p. m. Wednesday in a portable band shell in front of the courthouse, 3231 Torrance Blvd.

The public may attend, free of charge. The concert is being sponsored by the Department of Parks and Recreation.

# Braille Globe Aids the Blind

A large Braille relief globe that enables blind people to study geography and follow the course of current events has been donated to the Braille Institute.

Measuring 33 inches in diameter, the globe defines the world's political and geographical boundaries and topographical features by Braille markings in addition to identifying major countries and cities in the raised-dot system of writing. Brailled delineations of latitude and longitude references are included.

# Civil Service to Review Ages

As a result of Supervisor Kenneth Hahn's request that the county Civil Service Commission adopt more realistic regulations concerning age limits for county jobs, the commission is reviewing its practices in preparation for a public hearing on amendments to its rules so age requirements will be standardized.

# YOUR GOOD HEALTH

## New Drug Proves Effective for Ringworm of the Scalp

By Roy O. Gilbert, M. D., L. A. County Health Officer

Ringworm of the scalp is a troublesome and contagious skin disease that occurs chiefly among school children, although cases occasionally do occur in very young children and adults. If untreated, or not given persistent treatment, the infection may last for many months or years.

The disorder is caused by different species of vegetable parasites (fungi) that invade the outer layer of the scalp, the hair follicle, and eventually the hair shaft itself. This is followed in about 10 to 14 days by one or more oval, grayish-white patches that appear on the scalp.

These patches are not visible under ordinary light but can be seen as fluorescent areas when the scalp is examined under a Wood's light (filtered ultraviolet rays) in a blacked-out room.

The scalp and hair may look normal to the untrained eye in the early stages of the infection unless a Wood's light is used, but soon the hair in each patch becomes dull and lifeless and breaks off above the scalp.

This is often the first notice-

able sign that an abnormal condition exists. The lesions usually expand to about the size of a dollar and eventually the hair drops off.

Generally speaking, there are three different types of ringworm that affect the scalp. Each is caused by a different fungus. The least bothersome is caused by the fungus Microsporum lanosum. It is often referred to as the animal type of ringworm because it is spread chiefly by animal pets, particularly infected dogs and cats.

The two so-called human types prevalent in this area are caused by the fungi Microsporum adouinii and Trichophyton tonsurans, and these forms of the disease are usually spread from person to person. Most adults and adolescents are resistant to Microsporum adouinii infections. On the other hand, although children are more susceptible, all ages are subject to infection by the Trichophyton species.

Laboratory examination is required to determine the type of fungus and the duration of the infection is directly related to the particular type that is found. The animal type, for instance, has a usual duration of not more than three to four months, whereas the human types of the disorder persist for many months and even years. In 97% of all cases, the regrowth of hair is normal after cure.

While ringworm of the scalp, particularly the human type, is contagious, it is not usually considered necessary to exclude an infected child from school.

Nevertheless, it is imperative that instructions be followed very carefully to the prescribed treatment and to the preventive measures that must be employed to prevent spread of the disease. Otherwise the period of infection may be unduly prolonged.

Griseofulvin, a new drug that is taken by mouth, is recently coming into use and gives promise of being more effective in the treatment of ringworm of the scalp than those medications now currently employed. A pamphlet on ringworm, which includes a brief discussion of ringworm of the scalp, will be mailed to anyone who sends a card of request to the Division of Health Education, Los Angeles County Health Department, 241 N. Figueroa St., Los Angeles 12.

# PFC Clyde Mose Completes Class

Army PFC Clyde E. Mose, 823 Sartori St., recently completed the four-week airborne course at The Infantry School, Fort Benning, Ga.

Mose qualified as a paratrooper and received training in the duties of a jumpmaster. He entered the army in November, 1956.

# Hospital Renamed

On recommendation of Supervisor Burton W. Chace, the Board of Supervisors renamed the Seaside Hospital in Long Beach to the Long Beach-County Chronic Disease Hospital.

Use Press classified ads to buy, rent or sell. Phone DA 5-1515.

# LEGAL NOTICES

CERTIFICATE OF BUSINESS FICTITIOUS FIRM NAME THE UNDERSIGNED does hereby certify that he is conducting a General Building Contracting business at 1520 Torrance Boulevard, City of Torrance, California, County of Los Angeles, State of California, under the fictitious firm name of ABE ATLAS CONSTRUCTION and that said firm is composed of the following persons, whose names and addresses are as follows: to-wit: Thomas W. Moore, 1520 Torrance Boulevard, Torrance, California. WITNESS his hand this 17th day of March, 1960.

THOMAS W. MOORE STATE OF CALIFORNIA COUNTY OF LOS ANGELES—ON THIS 17th day of March, A. D. 1960, before me, RUTH H. PETERSON, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared Thomas W. Moore, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same. IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

RUTH H. PETERSON (SEAL) Notary Public in and for said County and State My Commission Expires June 6, 1961 S—March 20, 27; April 3, 10, 1960

NOTICE OF INTENDED SALE Under Section 2444 Civil Code of the State of California

NOTICE IS HEREBY GIVEN That GEORGE W. TURNAGE, Vendor, whose address is 1804 Cobello, in the City of Torrance, County of Los Angeles, State of California, intends to sell to OLIVER E. LOVELADY and JOHN WORLEY JR., Vendees, who reside at 2208 Eastwood Court and 820 Anapola, respectively, in the City of Torrance, County of Los Angeles, State of California, the following described personal property, to-wit:

All stock in trade, fixtures, equipment and good will of a certain service station and garage business known as GEORGE'S SALES & SERVICE and located at 2172 Torrance Blvd., in the City of Torrance, County of Los Angeles, State of California, and that a sale, transfer and assignment of the same will be made, and the consideration therefor will be paid at 12:00 o'clock P.M. on the 10th day of April, 1960, at the law office of ROBERT HOLDHAUER, Attorney at Law, at 1850 Sunset Blvd., in the City of Los Angeles, County of Los Angeles, State of California.

Dated March 30, 1960 H-O 8-7480

GEORGE W. TURNAGE Vendor OLIVER E. LOVELADY Vendee JOHN WORLEY, Jr. Vendee

Torrance Press—S. April 3, 1960

To Start A Want Ad

DA 5-1515 Classification INDEX

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RENTALS Houses for Rent, etc.

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COMPLETE BOOKKEEPING SERVICE

Building and Remodeling CEMENT work

TILE CONTRACTOR, bathrooms & kitchen

# You're Invited! Southwest Savings' big Birthday Party!

during the entire month of April

Back in 1945 Southwest Savings opened its doors in Inglewood. Not long after, the Torrance office was added. Now—15 years and \$62,000,000 later—Southwest serves you and your neighbors from its two beautiful, new buildings. It's a grand April-long birthday party filled with free

prizes awarded each Friday in the month—free bonus premiums—a free gift to each visitor—and tasty refreshments served to all guests thru the 11th. Southwest Savings welcomes you—and your family—and invites you to join in the festive celebration.

# FREE!

6 fabulous birthday prizes each week in April

It's easy! Simply register for the week's contest. You may enter only once each week, but you can enter them all. Drawings on the 8th, 15th, 22nd and 29th of April. All adults, except Southwest employees and their families, are eligible. You needn't be present to win.

# WIN a Philco "Slender Seventener" Portable TV Set

1st prize each week

# WIN an Electric Frying Pan

5 second prizes each week

Extra-heavy gauge cooking aluminum. 12" diameter. Westinghouse thermostat. Easy lift handle. Jewelled signal light heat indicator.

# FREE! APRIL BIRTHDAY GIFTS

Your choice

Happy Birthday Kitchen Set. Drip pan, soap dish, scourpad, scoop, measuring cup, funnel and butter dish in handsome unbreakable polyethylene.

Your choice

11-Piece Interchangeable Screwdriver Kit. Unbreakable, shockproof plastic handles. Hardened, tempered tool steel blades. Aluminum screw chuck. Includes cold chisel, tacklifter, awl, glass cutter and a variety of blades.

Your choice

5-Piece Deluxe Bar-Set. Set. Fork, baster, tongs, skewer, turner. Leather thongs. Extra-long steel shafts. only one oil per customer.

for new accounts or additions of \$200-\$499:

for new accounts or additions of \$500 and up:

current annual rate **4 1/2%** Paid Quarterly

each account insured up to \$10,000 funds received by April 11th earn 4 1/2% from the 1st

# Southwest Savings

AND LOAN ASSOCIATION

FREE GIFT to each visitor during April REFRESHMENTS thru April 11th ASSETS OVER \$62,000,000

INGLEWOOD: 2700 W. Manchester (at 6th Ave.)—PL. 3-0111  
TORRANCE: 1603 Cravens (at Marcelina)—FA. 8-6111